Amendments to the Claims

The following listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (currently amended): A washing device for an impression cylinder jacket of an impression cylinder in a sheet-fed offset two-sided printing press, comprising: ~~equipped with~~

an impression cylinder installed with a jacket having a flexible metal plate, a base layer formed to have concave-convex profile on the surface of said metal plate and a low surface energy resin layer formed on said base layer, ~~comprising:~~

a cleaning unit capable of being in contact with or separated from a blanket cylinder that opposes said impression cylinder;

a water dampening unit equipped with a water form roller capable of being in contact with or separated from a plate cylinder that opposes said blanket cylinder and supplying water to said plate cylinder;

an inking unit equipped with an ink form roller capable of being in contact with or separated from said plate cylinder and supplying ink to said plate cylinder; and

a controller that executes a first control of causing said plate cylinder to contact with said blanket cylinder and said blanket cylinder to contact with said impression cylinder, and ~~causes~~ causing each cylinder to rotate under those contacts for a specified period of time while said cleaning unit is in contact with said blanket cylinder; and a second control of separating said plate cylinder from said blanket cylinder after said first control, and causing said water form roller and said ink form roller to contact with said plate cylinder after the separation of said plate cylinder from said blanket cylinder, wherein

said cleaning unit is located only at said blanket cylinder among those cylinders, and

said first control and said second control are executed after a printing job.

Claim 2. (Original) A washing device for an impression cylinder jacket as claimed in claim 1, wherein

said controller, in executing said first control, after causing said blanket cylinder to rotate for a specified period of time while keeping said plate cylinder separated from said blanket cylinder and said blanket cylinder separated from said impression cylinder while keeping said

cleaning unit in contact with said blanket cylinder, causes each cylinder to rotate for a specified period of time keeping said plate cylinder in contact with said blanket cylinder and said blanket cylinder in contact with said impression cylinder while keeping said cleaning unit in contact with said blanket cylinder.

Claim 3. (Original) A washing device for an impression cylinder jacket as claimed in claim 1, wherein

said cleaning unit is an nonwoven fabric cloth impregnated with washing liquid which is supplied during a washing process.

Claim 4. (Original) A washing device for an impression cylinder jacket as claimed in claim 3, wherein

said washing liquid is washing solvent and water and the washing solvent and water is supplied alternately during the washing process.

Claim 5. (Original) A washing device for an impression cylinder jacket as claimed in claim 4, wherein

said first control ends when washing with supplied water ends.

Claim 6. (Original) A washing device for an impression cylinder jacket as claimed in claim 1, wherein

said cleaning unit is a brush to which washing liquid which is supplied during a washing process.

Claim 7. (Original) A washing device for an impression cylinder jacket as claimed in claim 6, wherein

said washing liquid is washing solvent and water and the washing solvent and water is supplied alternately during the washing process.

Claim 8. (Original) A washing device for an impression cylinder jacket as claimed in claim 7, wherein

said first control ends when washing with supplied water ends.

Claim 9. (Original) A washing device for an impression cylinder jacket as claimed in claim 1, wherein

said cleaning unit is an nonwoven fabric cloth impregnated with the washing liquid in prior to the washing process.

Claim 10. (Original) A washing device for an impression cylinder jacket as claimed in claim 9, wherein

said controller causes said water form roller to contact with said plate cylinder after causing said ink form roller to contact with said plate cylinder in executing said second control.

Claim 11. (Original) A washing device for an impression cylinder jacket as claimed in claim 1, wherein

in causing said plate cylinder to contact with said blanket cylinder and said blanket cylinder to contact with said impression cylinder in said first control, said controller causes said blanket cylinder to move to contact with said impression cylinder either simultaneous with or after causing said plate cylinder to contact with said blanket cylinder.

Claim 12. (Original) A washing device for an impression cylinder jacket as claimed in claim 1, wherein

said base layer is a metal thermal sprayed layer formed by thermally spraying metal.

Claim 13. (Original) A washing device for an impression cylinder jacket as claimed in claim 1, wherein

said base layer comprises a metal thermal sprayed layer formed by thermally spraying metal, and a porous ceramic thermal sprayed layer formed by thermally spraying ceramics on top of said metal thermal sprayed layer .

Claim 14. (Original) A washing device for an impression cylinder jacket as claimed in claim 1, wherein

said low surface energy resin is a silicone group resin.

Claim 15. A washing method for an impression cylinder jacket of an impression cylinder in a sheet-fed offset two-sided printing press ~~equipped with an impression cylinder installed with a jacket having a flexible metal plate, a base layer formed to have concave-convex profile on the surface of said metal plate and a low surface energy resin layer formed on said base layer~~, comprising the steps of:

1) providing an impression cylinder installed with a jacket having a flexible metal plate, a base layer formed to have concave-convex profile on the surface of said metal plate and a low surface energy resin layer formed on said base layer;

~~1~~2) rotating said impression cylinder, a blanket cylinder opposing said impression cylinder, and a plate cylinder opposing said blanket cylinder;

~~2~~3) causing a cleaning unit capable of being in contact with or separated from said blanket cylinder to contact with said blanket cylinder;

~~3~~4) causing said plate cylinder to contact with said blanket cylinder and said blanket cylinder to contact with said impression cylinder while keeping said cleaning unit in contact with said blanket cylinder;

~~4~~5) separating said plate cylinder from said blanket cylinder after causing each cylinder to rotate in such contacts for a specified period of time; and

~~5~~6) causing a water form roller capable of being in contact with or separated from said plate cylinder in a water dampening unit capable of supplying water to said plate cylinder, and an ink form roller capable of being in contact with or separated from said plate cylinder in an inking unit to contact with said plate cylinder.

Claim 16 (currently amended). A washing method for an impression cylinder jacket as claimed in claim 15, wherein

said step ~~3~~ 4) is a step for causing said blanket cylinder to contact said impression cylinder simultaneous with or after causing said plate cylinder to contact with said blanket cylinder.

Claim 17 (new) A method of washing an impression cylinder in a sheet-fed offset two-sided printing press, comprising the steps of:

providing an impression cylinder having a low surface-energy coating, such that said impression cylinder is resistant to the transfer of ink;

providing a blanket cylinder, capable of engaging said impression cylinder;

providing a washing unit capable of providing washing fluid, and capable of engaging said blanket cylinder;

providing a plate cylinder, capable of engaging said blanket cylinder;

transferring washing fluid from said washing unit to said impression cylinder jacket via said blanket cylinder, said step of transferring comprising engaging, while rotating, said blanket cylinder with said impression cylinder jacket, with said plate cylinder and with said washing unit, thereby washing said impression cylinder jacket;

removing washing fluid from said plate cylinder, said step of removing comprising:

disengaging said blanket cylinder from said impression cylinder jacket, said plate cylinder and said washing unit;

providing a water roller capable of contacting said plate cylinder;

providing an ink roller capable of contacting said plate cylinder; and

contacting, while rotating, said plate cylinder with said water roller and with said ink roller, such that said washing fluid is removed from said plate cylinder.

Claim 18 (new): The claim recited in claim 17, wherein said step of providing an impression cylinder having a low surface-energy further comprises attaching an impression cylinder jacket to an impression cylinder, said impression cylinder jacked comprising a flexible metal plate, a convex-concave profiled base layer formed on said flexible metal plate and low surface energy coating on said base layer.

Claim 19 (new): The claim recited in claim 17, further comprising the step of engaging said blanket cylinder with said washing unit prior to said step of transferring said washing fluid.

Claim 20 (new): The claim recited in claim 17 further comprising the step of engaging said ink roller with said plate roller prior to engaging said water roller to said plate roller.

Claim 21 (new): An apparatus for washing an impression cylinder in a sheet-fed offset two-sided printing press, comprising:

an impression cylinder having a low surface-energy coating, such that said impression cylinder is resistant to the transfer of ink;

a blanket cylinder, capable of engaging said impression cylinder;

a plate cylinder, capable of engaging said blanket cylinder;

a cylinder engagement mechanisim capable of engaging, while rotating, said blanket cylinder with said impression cylinder jacket, with said plate cylinder;

a washing unit capable of providing washing fluid, and capable of engaging said blanket cylinder, such that washing fluid is transferred from said washing unit to said impression cylinder jacket via said blanket cylinder when said cylinders are engaged and rotated, thereby indirectly washing said impression cylinder jacket; and

a water roller capable of contacting said plate cylinder and an ink roller capable of contacting said plate cylinder, such that when said water roller and said ink roller are contacted with said plate cylinder, and said plate cylinder is disengaged from said blanket cylinder, and rotated, said washing fluid is removed from said plate cylinder.